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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,645	08/07/2003	Nobuaki Tokushige	900-470	8809
23117	7590	10/29/2004	EXAMINER PERT, EVAN T	
NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714			ART UNIT 2829	

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,645

Applicant(s)

TOKUSHIGE, NOBUAKI

Examiner

Evan Pert

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6 is/are rejected.
- 7) ☒ Claim(s) 4,5 and 7-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0803</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant's claim for priority to Japanese application No. 2002-230056 filed August 7, 2002, under 35 USC 119 is acknowledged as stated by the Oath. As such, lines 5-9 of page 1 of the specification are unnecessary as being redundant over field [30] of an issued patent. Actually, the "Cross-Reference to Related Application" section is appropriate for domestic priority statements under 35 USC 120 and 35 USC 119, and need not include a reference to foreign priority under this section [see MPEP 201.11 as directed by MPEP 601(I)(B)].

If applicant insists that "incorporation by reference" is *necessary*, then a certified English translation is required for proper incorporation by reference of essential subject matter [see MPEP 608.01(p)(I)].

Specification

2. The disclosure is objected to because of the following informalities:
- Lines 5-9 of p. 1 should be deleted (being redundant over field [30] of a patent).
 - At p. 11, line 16, "pattering" should read --patterning--.

Appropriate correction is required.

Claim Objections

3. Claim 9 is objected to because of the informality at line 4 wherein "pattering" should read --patterning--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. (US 5,821,138).

Regarding claim 1, Yamazaki et al. discloses a semiconductor device production method [abstract] comprising the steps of (a) forming an insulative film (102) on an underlying substrate (101); (b) forming a semiconductor layer (104) on the insulative film (102); (c) bonding (with resin 119) a flexible substrate (120) "onto" the semiconductor layer (and "onto" other circuitry parts added to the semiconductor layer); and (d) separating the semiconductor layer on the flexible substrate from the insulative film on the underlying substrate (by etching away insulative layer 102).

Regarding claim 2, the semiconductor layer 104 is formed into a crystallized silicon layer [title] by steps comparable to the claimed steps (b1) through (b4) wherein the catalytic layer is a layer comprising nickel (105).

Regarding claim 3, a semiconductor element (i.e. a TFT) is formed after forming the semiconductor layer on the substrate.

Regarding claim 6, the insulative film layer (102) is etched away for the separation step (d).

Allowable Subject Matter

5. Claims 4-5 and 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 9 (as well as claims 9-15) are objected to for the informality wherein "pattering" should read --patterning--.

6. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 9-13, the prior art does not disclose applicant's claimed method particularly characterized by forming a semiconductor layer having a thick film portion and a thin film portion, bonding a flexible substrate, and separating the semiconductor layer from an insulative film on an underlying substrate.

Regarding claims 4 and 5, applicant's claimed method can be distinguished from prior art by patterning of amorphous silicon (a-Si) or of a catalytic layer, which are a way of characterizing the steps of forming a semiconductor layer in accordance with other aspects of applicant's invention such as forming a semiconductor layer on an insulative film having recesses for forming a thick portion.

Regarding claims 7-8 and 14-15, the prior art does not suggest a semiconductor device made by applicant's method particularly characterized by evidence that a semiconductor layer was grown on an insulating film, bonded to a flexible substrate, and was separated from the insulating film on which the semiconductor layer was grown, the semiconductor layer having a thickness of 25 μm to 100 μm (wherein the claimed

thickness in combination with the feature of a flexible substrate is uniquely made possible by a combination of thick and thin portions that make flexibility with a thicker semiconductor layer possible in applicant's invention per specification p. 13, lines 5-10).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 571-272-1969. The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ETP
October 25, 2004


EVAN PERT
PRIMARY EXAMINER